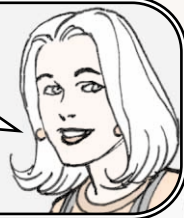


THIS IS PART 2  
OF 3 IN A SERIES  
ON AMMUNITION  
IN DEPLOYMENT  
SITUATIONS.



IS  
THAT THE  
AMMO  
DUMP?

# Ammo

# Storage Is Important, Too

SOMETHING  
TELLS ME THAT  
AMMO DIDN'T  
GET STORED  
PROPERLY!

ONLY IF AMMUNITION  
HAS BEEN PROPERLY  
STORED, MAINTAINED,  
PACKAGED AND  
INSPECTED CAN IT DO  
ITS LETHAL BEST ON  
THE BATTLEFIELD.

SO DO **YOUR** BEST  
WITH THE FOLLOWING  
INFORMATION.

## Ammunition Storage

Ammunition storage conditions at the ammunition supply point (ASP), where large quantities of ammunition are stored, are a lot different from the conditions found in field storage, where smaller quantities are stored outside, in MILVANs, or aboard tactical and combat vehicles. Hazards of the various munitions must be considered in all of these storage environments.

Quick access to different types of ammunition may be desired, but safety factors and separation distances restrict the quantity and mix.

Establish explosives limits for each site/location. Use DA Pam 385-64, *Ammunition and Explosives Safety Standards*, FM 4-30.13, *Ammunition Handbook: Tactics, Techniques, and Procedures for Munitions Handlers*, or contact your Quality Assurance Specialist (Ammunition Surveillance) "QASAS" for specific guidance in these areas. Follow the directions of DA Pam 710-2-1, *Using Unit Supply System (Manual Procedures)*, and other appropriate regulations for accountability and record keeping.

ONCE YOU'VE  
ESTABLISHED  
EXPLOSIVES  
LIMITS, CONSIDER  
THE FOLLOWING  
STORAGE SAFETY  
FACTORS...



- ☆ Point all boxes or containers in a stack in the same direction, leaving the ammunition markings clearly in view.
- ☆ Isolate rockets into single rows, pointing away from personnel and property. Preferably, rockets should point toward an embankment or some other type of barrier.
- ☆ Post the correct fire symbol and, when appropriate, chemical hazard symbols for each magazine or field storage unit. Refer to DA Pam 385-64 for proper guidance.

Post fire and chemical hazard symbols



## Outdoor Storage

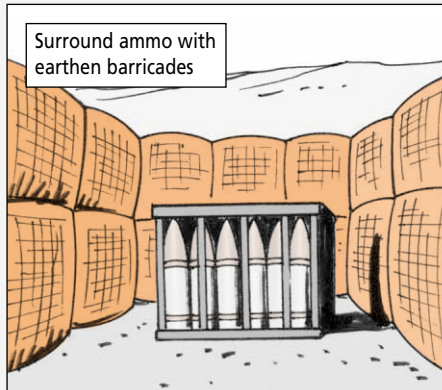
THE **BEST** PLACE FOR OUTDOOR STORAGE OF AMMUNITION IS ON HIGH, HARD GROUND WITH GOOD DRAINAGE.



IF YOU **CAN'T** FIND THAT SORT OF SITE, YOU MAY HAVE TO DIG DRAINAGE DITCHES AROUND THE STACKS TO PROTECT THEM.

Stack palletized or boxed ammunition on a solid, level base, with at least three inches of dunnage. Stack heights may be changed to meet local conditions such as pallet height and available equipment, but a good rule of thumb is to stack ammunition boxes only as high as your head. Allow room between the ammunition stacks to remove debris.

- ✧ Except for 2.75-in rockets, never store white phosphorous munitions lying on their sides.
- ✧ Park all vehicles and trailers loaded with explosives at least 250 feet from other vehicles and trailers transporting flammable liquids or cargo vehicles loaded with packaged gasoline, diesel fuel or similar flammables. Make sure any fuel in the area is located downhill from ammunition.
- ✧ Separate serviceable ammunition from any unserviceable, foreign or captured ammunition.
- ✧ Earthen barricades should be used in unit ammunition storage areas to prevent or lessen the spread of potential explosions. The barricades can also be used to protect uploaded aircraft and key administrative/ operational facilities from low-angle fragments produced in explosions.



Surround ammo with earthen barricades

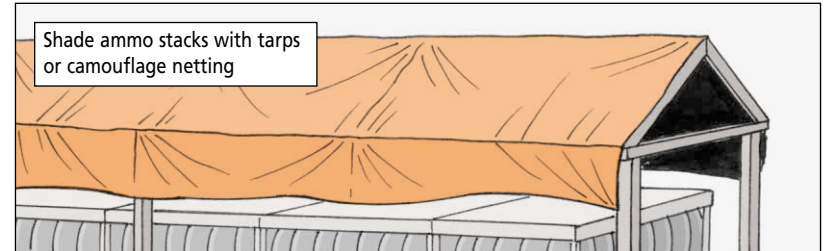
Barricades must be higher than the stacks of ammunition they separate and must be at least 3 feet wide at the top to be effective. Numerous construction aides (sand grid systems, Hesco Bastion, etc.) are available through the Defense Supply Center, Philadelphia.

Do not store ammunition directly on the ground for any length of time. Wood boxes absorb too much water during rainy conditions, causing the wood to rot. Use dunnage or pallets to maintain a minimum three-inch space beneath and around stacks of ammunition to allow air circulation.

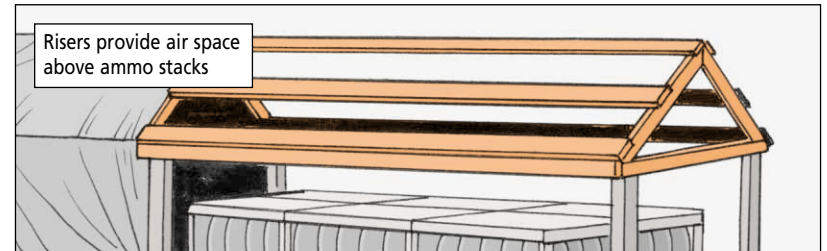
Wet, muddy ground may cause ammunition stacks to shift and fall. Keep stacks straight and dunnage in good condition. If available, consider using Air Force landing mats for outdoor storage to provide a firm base on all types of soil.

Ammunition stacks kept outdoors should be covered with tarpaulins as protection against the elements. Camouflage netting is a good idea for shade during the summer months. Keep a minimum of 18 inches of space between the stacked ammunition and the overhead tarp or net so that air can circulate. Locally fabricated risers placed on top of ammunition stacks will help.

Shade ammo stacks with tarps or camouflage netting



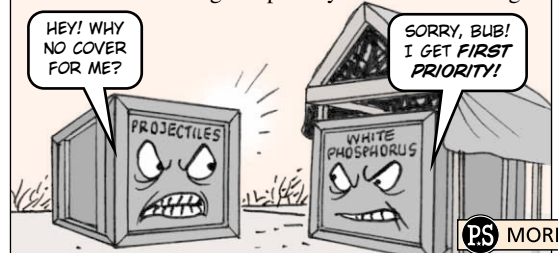
Risers provide air space above ammo stacks



Fasten the camouflage netting or tarps securely, but allow for quick lowering in the event of high winds. Never nail a tarp or net to ammunition boxes or pallets.

Pyrotechnic material, propelling charges, fuzes, rockets, white phosphorous ammunition and guided missiles have the highest priority for covered storage.

HEY! WHY NO COVER FOR ME?



PS MORE

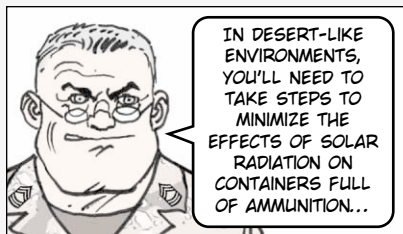


## MILVAN/Container Storage



Field storage of ammunition in MILVANs and other ISO containers represents a halfway point between outdoor storage and indoor magazine storage. When storing your ammunition in containers, here are some good points to remember:

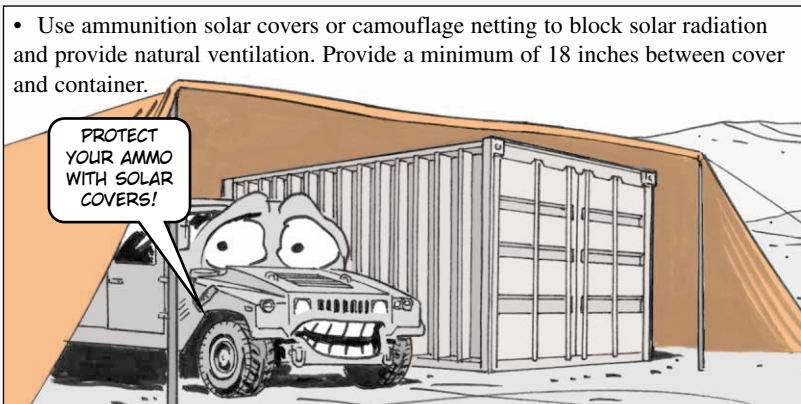
- Do not place the containers directly on the ground. At a minimum, place 4x4 inch or larger wood boards under each corner block to prevent damage to the cross members.
- Do not modify the containers in any way. If you add ventilation holes, welded ramps, or nailed-in structures, they won't meet international shipping standards.
- Treat containers carefully. Remember, they will be needed to ship unused ammunition back to your home station!



- Allow ventilation by opening doors as much as possible, consistent with safe and secure operations.



- Place sandbags along the sides and ends of the containers to reduce exposure to the sun.

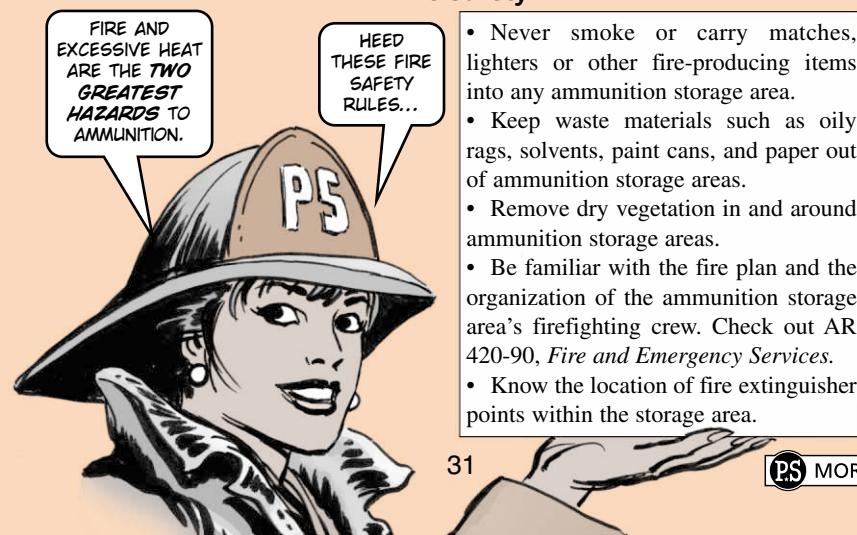


For more information on solar covers, check out this web-site:  
<http://www.sbcom.army.mil/products/shelters/ASC.htm>

The solar covers are available from war reserve stock. Units pay for shipping charges only. Contact the War Reserve Manager, Chris Elliott at DSN 793-3993, (309) 782-3993, or [elliottc@ria.army.mil](mailto:elliottc@ria.army.mil).

You can also contact SBCCOM's Frank Kostka at DSN 256-5257, (508) 233-5257, or [frank.kostka@natick.army.mil](mailto:frank.kostka@natick.army.mil) for more information.

## Fire Safety

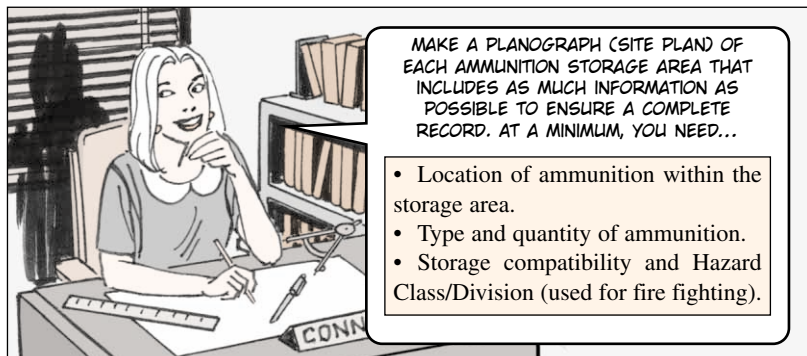


- Never smoke or carry matches, lighters or other fire-producing items into any ammunition storage area.
- Keep waste materials such as oily rags, solvents, paint cans, and paper out of ammunition storage areas.
- Remove dry vegetation in and around ammunition storage areas.
- Be familiar with the fire plan and the organization of the ammunition storage area's firefighting crew. Check out AR 420-90, *Fire and Emergency Services*.
- Know the location of fire extinguisher points within the storage area.

## Accountability



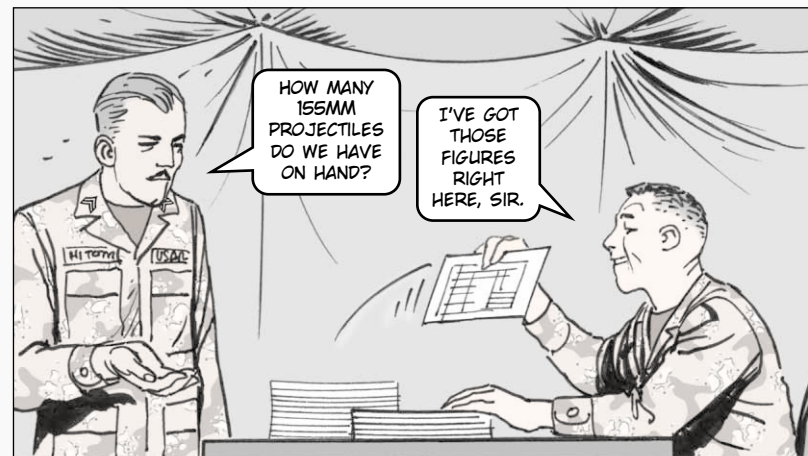
Always strive to maintain proper accountability and lot or serial number integrity when dealing with ammunition. Stacking ammunition by type, DODIC and lot number is critical whenever loading or storing ammunition.



Having the planograph information will help to save lives when trying to put out fires within a storage area. The plan will also save time when an emergency issue is needed. Update the planograph whenever changes are made to location, type, or quantity of ammunition.

If you are the accountable officer, keep all ammunition accountability documents such as hand receipts/sub-hand receipts and issue/turn-in receipts secure, but readily accessible. Keep all documents, because you will need them to “balance the books” when someone else takes over your duties.

## Ammunition Supply Rules

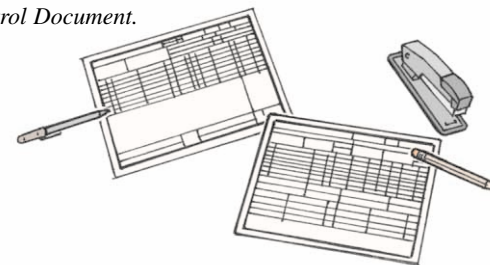


AMMUNITION SUPPLY PERSONNEL NEED TO BE AWARE OF THE FOLLOWING RULES...

- Request and store only the ammunition your unit needs.
- Turn in excess ammunition promptly.
- Maintain a “balance sheet” of all ammunition on hand.
- Maintain written records of all receipts, issues, and any other transactions.

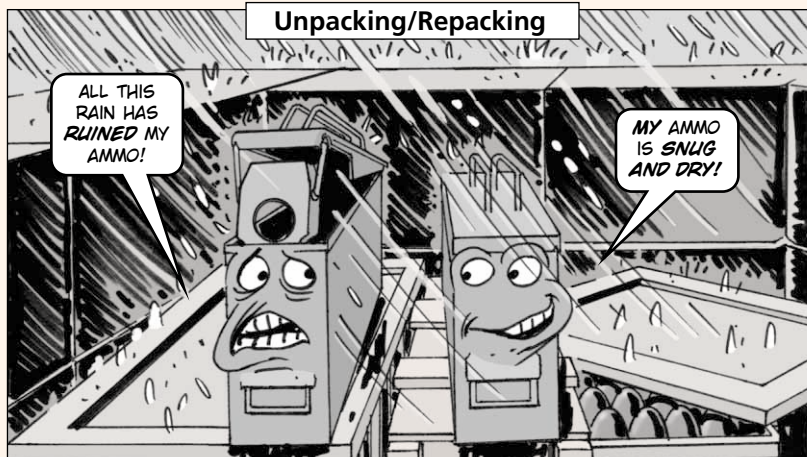
Commanders want to know how much ammunition is available to them and they want to know it **now**. Your records could have a significant impact on future tactical decisions. Knowing where, what kind, and how much ammunition is available to a commander has a direct influence on battlefield decisions.

See DA Pam 710-2-1 for more information on ammunition supply and inventory. This pamphlet provides instructions on preparing DA Form 581, *Request for Issue and Turn-in of Ammunition*, and DA Form 5515, *Training Ammunition Control Document*.





## Unpacking/Repacking



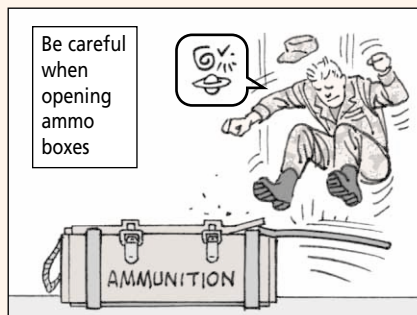
Keep all ammunition unitized and palletized as long as possible to allow for quick loading by material handling equipment.

When ammunition is kept packed, it also prevents exposure to the elements. This is especially true of material packed in barrier bags or sealed metal containers. Be sure to return desiccant to airtight containers as soon as possible.

Don't be rough when opening and closing ammunition boxes. Being careful protects you, the ammunition, and the box for later reuse.

Save your ammunition packaging! Place inner packing inside the outer pack, close the box and save it. There's a good chance you'll need to reuse it.

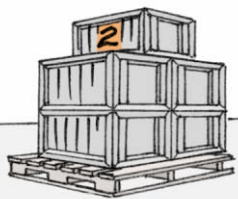
Make sure repackaged ammunition has the right stock number, lot/serial number and quantity marked on the container. Identification markings on boxes and containers are extremely important, so protect the integrity of the markings when repacking.



TO MINIMIZE ACCOUNTABILITY ERRORS IN MULTIPLE PACKS OF AMMUNITION, HAVE ONLY ONE BOX THAT'S LESS THAN FULL PER LOT.



CLEARLY MARK THE QUANTITY ON THE BOX AND PLACE IT AT THE FRONT OF THE STACK SO THAT IT'S THE FIRST USED.



## Maintenance and Inspection



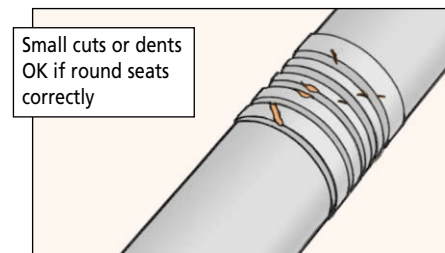
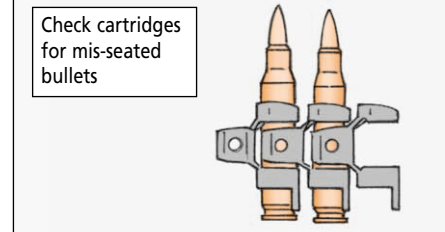
Operator and crew maintenance is usually limited to unpacking, repacking, inspecting, cleaning, and repairing packing material. The appropriate ammunition - 10, -12, or -20 series TM will provide a Maintenance Allocation Chart (MAC) for authorized field inspection, care, and maintenance.

Ammunition does not always survive movement or storage in the best condition. ASP personnel must ensure that ammunition is issued in proper working order. Part of this responsibility includes reporting any and all firing restrictions, which will be noted on the DA Form 581 with the ammunition issue.

After issue, it is up to you and your unit to inspect and care for the ammunition. Other than the allowable repackaging and maintenance instructions listed in the MAC charts, unserviceable ammunition should be returned to the ASP.

Small arms ammunition—especially operational loads—may have loose bullets or bullets pushed too far into the cartridge case. This ammunition shouldn't be used, so turn it in and draw new ammo. Obvious damage such as dents, cracks and bulges in cartridge cases also require turn-in.

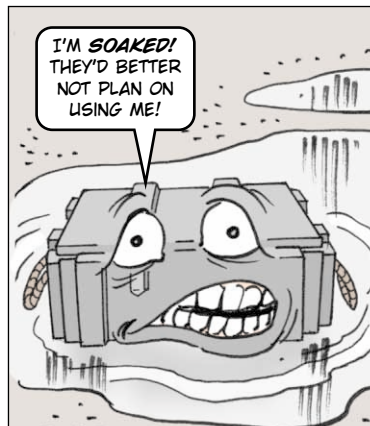
For larger ammunition, slight dents or bumps may be OK if the round seats correctly. Incidental/minor damage to surface areas of items such as mine or grenade cases is acceptable if the internal components or fuze cavities are not affected. The same applies to rust and corrosion.



Wipe off ammunition used in operational loads before repacking in containers. Moisture is the No. 1 cause of small arms ammunition deterioration. Never fire ammunition that has been water-soaked or has exceeded its temperature limits. Turn it in.

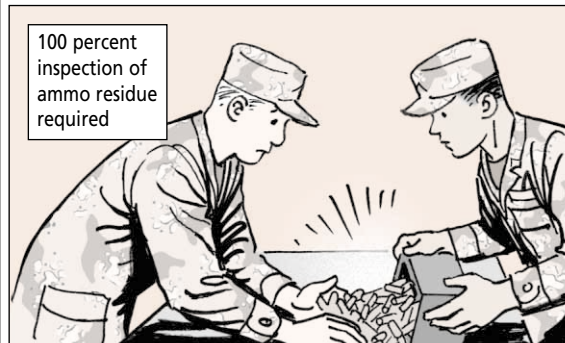
When an ammunition lot or serial number is lost, the ammunition is unserviceable and must be turned in to the ammunition supply organization. Ammunition that's incorrectly identified (training ammunition marked as high explosive or vice versa) could be hazardous to the user.

In the field, use felt tip markers to reapply identification markings to rounds and packing materials. Hand-written markings are better than no markings at all. The ammo TMs provide inspection criteria, and direct the turn-in of ammunition that doesn't meet field standards.



## Ammunition Recovery

- After training, collect and return fired brass, aluminum casings and empty ammunition containers to the ASP for recycling or reuse.
- Segregation operations at the ASP call for the unit turning in material to do a 100 percent inspection of residue to check for live explosives and munitions.

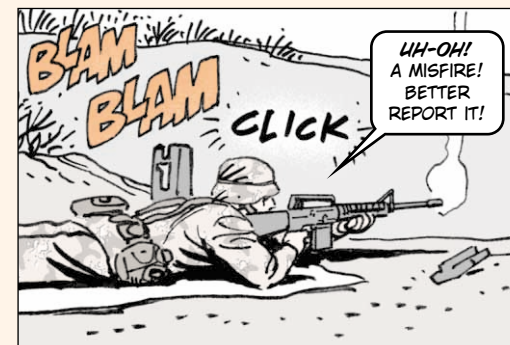


- A certification statement that the material is free of live ammunition will be added to the turn-in documents.

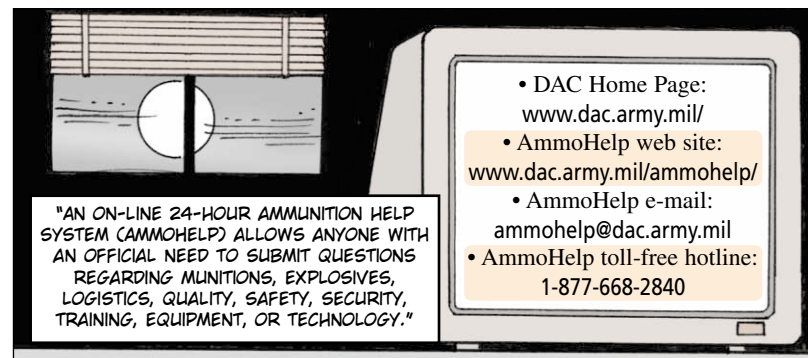
## Malfunctions

When your ammunition does not work the way it is intended to, you may have a malfunction. Malfunctions include hangfires, misfires, duds, abnormal functioning, and premature functioning of any ammunition items.

If you know or believe you are having an ammunition malfunction, report it ASAP through your chain of command. Check the lot number of the ammunition involved and discontinue use of that lot until the reason for the malfunction is determined. The best source for advice on ammunition serviceability is a QASAS.



## More Help



STAY TUNED NEXT MONTH! PART 3 WILL INCLUDE INFORMATION ON SPECIFIC TYPES OF AMMUNITION.